

Farm Land Conflict and its Socio-Economic Consequences in Tahtay Qoraro, Tigray, Ethiopia.

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Abstract

This study attempted to explore the main causes of farm land conflicts and its socio-economic consequences on the rural residents. The general objective of this study was assessing the causes and socio-economic consequences of farm land conflict in the study area. The study explored the agricultural productivity loss and socio-economic costs by using 175 rural farm household respondents. Moreover, focus group discussions and interview were also employed to collect qualitative data. The main causes of farm land conflicts are building extension on private land, population growth, fragmented land and drainage. Moreover, scarce farm land, high demand for land, inheritance problem and land grabbing are other causes of farm land conflicts. Disputant farmers do not invite or support each other in the social association and organizations. Therefore, farm land conflict terminates the social interaction of the community. Furthermore, the study finds that in average one farm household respondent waste more than one month and birr 2445.72 annually to execute his/her case when the farm land conflict went to the court. Moreover, farmers loss 18.8 percent to 23.2 percent agricultural productivity because of farm land conflict. Farm land conflict hampers local and national development by mainly affecting rural agricultural productivity. The large proportion of caseloads handled by the woreda court is farm land conflicts and more than half of farm land conflicts reach to the woreda court while few proportion address in the local area.

Keywords: Farmers, farm land, conflict, socio-economic, agricultural productivity, Tahtay Qoraro.

1. Introduction

Worldwide, 1.5 billion hectares of land can be classified as suitable for arable production (World Agriculture Industry, 2010). Farming accounts for about 22 percent of the global agricultural value chain (Deininger and Byerlee, 2011). There are 41.9 million hectares of non-agricultural areas and there are 1.8 million producers globally (Willer, 2011). FAO and UNDP (1997) in Evance (2010) have suggested that 12 percent more arable land is available globally, they also estimate that 16 percent of the arable land used now is degraded. Therefore, competition towards farm land use and control is expected to increase in the future (Evance, 2010). Land disputes are ordinary in almost all societies of the world (UN-HABITAT, 2009) as land played a vital role for prevalent conflict, peace-building and economic development. The rapid population growth on the world and environmental problems like land degradations escalate land related conflicts and many people have fought over land for a long period of time (USAID, 2005). Number of cases handled in the primary courts over land and property rights cover half (50 percent) of all the caseloads carry out in the court (World Bank, 2009).

Most world community especially developing world depend their economy on subsistent agricultural productivity. Land is the fundamental resource for the rural area residents to increase their agricultural productivity. Importance of existing adequate farm land to satisfy the food staff supply for the world community is unquestionable. Therefore, without land availability it is impossible to produce agricultural productivities. Since interest on land possession and control is increasing from time to time among farmers, it became the main factor of conflict.

The social and economic development for most of the African population is relied on the access to land, since majority of the population depends on land and land-based resources for their livelihoods (Fobih, 2004; Sekeris, 2010; Zwan, 2011). About 630 million hectare of land in Africa is suitable for cultivation, supporting the

majority of the people through subsistence and commercial agriculture (Rukuni and Kambanje, 2011). The existing farm land in Sub-Saharan Africa provided to households and communities are critical to food security and income stability of the people (Bob, 2010). Majority of African farmers are dependent on subsistence farming for their sustenance (Fobih, 2004).

However, now a day land in Sub-Saharan Africa is vulnerable to different conflicts, contest, disagreements, conquest and exploitation that have an adverse negative impact on the socio-economic and political conditions of many groups of people (Bob, 2010). Many African countries are experienced violent conflict because of competition for access, control and the use of land resources (Zwan, 2011).

Land conflict becomes the dominant conflict in the Sub-Sahara Africa countries over the last 50 years and has been disturbed by it (Sekeris, 2010). Since 2000, 48 percent of land conflicts have taken place in Africa (Wiley, 2009). The author noted that, 55 of the 70 conflicts underway in 2009 are located in developing agrarian economies. From the intra-state conflict occurred in Africa since 1990, natural resources contributed at least 40 percent and from the 30 and above intra-state conflicts occurred, land contributed a vital role in all except three i.e. more than 90 percent of natural resource conflicts are contributed by land (Ibid).

With an estimated population of above eighty million, Ethiopia stands as the second populous country in Africa. The main stay of the economy is subsistent peasant agriculture which accounts for about 42.9 percent of the GDP. Agriculture provides the largest proportion of foreign earnings and employs more than 85 percent of the population (African Development Outlook, 2011). The rank of Ethiopia's Human Development Index based on data available in 2011 and methods used in 2011 is 174 out of 187 countries (UNDP, 2011)

A growing population of nearly 80 million puts tremendous pressure on the farmland, pasture, and natural resources that are the foundation of the country's economic growth. Ethiopia also remains one of the poorest countries in the world, with one in four Ethiopians living on less than \$1 a day (USAID, 2011). Even though Ethiopia considered as the most stable country in the Horn of Africa, there are a lot of dominant internal and external security challenges surround the country (CIDA, 2011).

Historically, Ethiopia experienced many conflicts related with who control the land and will continue in the future to do so since land has a major socio-economic advantages on the majority of the people (Berhanu and Fayera, 2005).

Farmers are the main agricultural stakeholders in Ethiopia. The farmers are currently facing several challenges of land fragmentation and land degradation, which is resulting in a decline in their agricultural productivity and are threatening their livelihoods. Since the country's economy is dependent on agriculture that is contributing more than 40 percent in its GDP, peasants are the main stakeholders of development in Ethiopia. Farmers largely rely on the fragmented plots and rainwater as input to their production. The increase in the pressure resulting from land degradation and fragmented plot is aggravating the situation of competition and conflict among farmers on land.

Statement of the problem

Tigray is the first region from Ethiopia to implement land registration and certification from 1996 through 1998. In the region, many plots of cultivated land that are possessed by the farmers were recorded in the local language (Tigrigna) on a preprinted page in a record book located at the Tabia office. Thus, land-holder farmers acquire the provided certificate that consist lists of each parcel of land, the approximate size of the plot, the type of land and the names of the neighboring land-holders (Holden, Deininger et al., 2008; Mitiku et al., 2005; Toulmin, 2006). The main purpose of farm land certification was proposed to reduce the risk of encroachment by neighbors and enhanced tenure security among land holders. It can also contribute to reduce the number of border disputes among farmers. Considering all these advantages, land registration has been completed in woreda Tahtay Qoraro (Solomon, 2005).

However, in Tigray many woreda courts are crowded by large number of land-related disputes and it is increased from time to time even only a very small fraction of the local disputes reached the woreda courts (Holden, Deininger et al., 2008) because most of them addressed by the local conflict mediators. More than 50 percent of all local conflicts in the region are land-related and about 8.2 percent of the conflicts that have been mediated by local conflict mediators went to the woreda courts (Holden et.al. 2010). A large share (46.5 percent) of these land-related conflicts that went to the woreda courts were border conflicts (Ibid).

Courts and rural land administrations remain busy in their day to day mitigating activities and functions in woreda Tahtay Qoraro. This is because of massive flux of conflicting parties or persons to the courts in case of land. In the woreda courts, woreda desk land administration, local land use administration and local social court, land issue remains continuously crowded enough. Moreover, the farmers expend more time in these justice and administrative institutions. Farm land conflict is not only affecting farmers' income but also misfortune the whole development of a country. Whenever there is farm land conflict among farmers it is obvious that their agricultural productivity decreases from time to time that is a threat for their livelihood. Agricultural productivities hampered highly and shrink by the farm land conflicts (Sekeris, 2010). These are not the only economic crisis of farmers, but also they are vulnerable to different unnecessary expenditures in time of accusation because of land conflict. They are expected to cover legal counselor costs, transport costs, personal living costs, material costs and others that weaken their income. Even though farmers spend all these costs to win their case, sometimes they can be losers which demoralize them in addition of their cost crisis.

Equib, Edir, Mahber, Zikir, intermarriage, organized labor etc are the common social activities of the community in the study area. These social activities have contribution for consolidation of the community and cooperative work since it is considered as a source of social capital. Thus, the social activities have been given due emphasis for a long period of time and they have religious and cultural aspect in the study area. The social condition of rural community is highly interrelated with their economic conditions because the community depends on the agricultural productivity to make social and religious feast and ceremonies like marriage, Mahber and other social activities. Thus, the farm land conflicts poison these social activities through declining the agricultural productivities of farmers. In addition, the social organizations like religious association (Mahber), social association (Idir) and labor organization (Lifinty) are highly affected by the farmers land conflict. Moreover, the kinship relation become hostile because of farm land conflict and relatives' relationship is highly affected by it and encountered by tension.

The finding of Deininger and Castagnini (2004) in Uganda shows that farm land conflict has a negative impact on the productivity of farmers through consuming more time to attempt resolving the land conflict which otherwise could have been used in productive activities and reduces land related investment not only by local farmers but also by outside investors. Thus, farm land conflict will be associated with significant economic losses (Ibid). Moreover, the finding of Yasmi et al. (2010) in Cambodia indicates that many farmers experienced high costs, both financially and in terms of the time because of farm land conflict. Their research indicates that the community spent more than US\$2,000 during the conflict to cover transportation and accommodation of other necessary expenditures. Furthermore, farm land conflict impedes the social relationships in profound ways (Huggins et al., 2005). Land conflict is not only challenge to agricultural productivity but also it represents an increasingly serious social problem that undermines both the faith of people in the system and their ability to achieve sustainable livelihoods (Sovannarith et al., 2001).

All the above mentioned social and economic consequences of farm land conflict are the challenges of rural residents. But these social and economic consequences may be different in the study area because it has its own unique features. Therefore, the researchers are going to assess the unique features of farm land conflict and its socio-economic consequences in the study area. Despite the increasing incidences of land conflicts, previous studies on this topic have been limited to some specific incidences that are related to large-scale civil strife or politically motivated conflicts (Yamano and Deininger, 2005).

Objective of the study

General objective

The general objective of this study is assessing the causes and socio-economic consequences of farm land conflict in the study area.

Specific objectives

- Identify the main causes that accelerate farm land conflict in the study area.
- Examine the effect of farm land conflicts on the social interactions and organizations of the community in the study area.
- Identify the expected costs and expenditures of farmers experienced in farm land conflict that affect their personal income in the study area.
- Inspect the consequence of farm land conflict on the agricultural productivity of farmers in the study area.

Significance of the study

Sustainable development in rural agriculture requires the prevalence of peaceful co-habitation among farmers and farm land security. The disruption of agricultural productivity, as a result of land conflict hampers development and as well may lead to intensification of poverty. Therefore, a study on farm land conflict and its socio-economic consequences is one important area of development research. The study could render the following advantages to the study area and other areas with similar problems.

- Introduce better perspectives that land conflicts have an adverse impact on socio-economic productivity and development
- Assist current and/or future development projects in the area to integrate relevant objectives of problem solving (like conflict resolution) based on the findings in the study
- Inspire future research activities over crucial factors focused on the study in relation to farm land conflict.

Moreover, the findings/outcomes of this research will inform and assist the various government agencies and NGOs that are presently working to promote development activities and projects in rural areas and enable them to consider the actual farm land conflict in the study area.

Scope and limitation of the study

This study specifically focuses on analyzing the farm land conflict and its socio-economic consequences in the study area. The specific study area is Tahtay Qoraro woreda of North West zone in the national regional state of Tigray. Accordingly any of the analysis and the findings of the study are specific to the study area. Therefore, the findings of this study may not represent or correspond to other areas/woredas of the region. Thus, because of the scope the findings of the study are limited to that area only. Methodologically, the research employed both qualitative and quantitative method to analyze the collected data. The content scope is farm land conflict and its socio-economic consequences. Therefore, conclusions and recommendations are limited to the farm land conflict and its socio-economic consequences. The woreda court and woreda desk land administration of the study area have not modern data base to organize their data. As a result, there were challenges to collect data from the files and reports of these offices because the available data are not well organized and completed. The study area is selected due to the previous knowledge of the researchers about the prevalence of farm land conflict in the area.

2. Research Methodology

Location and physical character

The administrative center of woreda Tahtay Qoraro is Shire Endasselassie town that is also the administrative center of the North Western Zone of the Tigray region, Ethiopia. According to the CSA (2008) the total population of Woreda Tahtay Qoraro is 68,549 and the woreda covers an area of 662.14 square kilometers or 66,214 hectares, of which 18,640 hectares are cultivated land, 10,298 hectares are pastureland, 13,093 hectares are non-cultivated land and 24,183 hectares are forest area (14,073 hectares are protected forests and 10,110 hectares are natural forests). The average land holding is 1.16 hectares per household.

Data Type and Sources

The study employed both qualitative and quantitative data. In this research basically, primary data source was employed to gather first-hand information to achieve the objectives of the research. Secondary source was also considered for gathering certain secondary information in order to consolidate the first-hand information. Data obtained from respondents through questionnaire, focus group discussion and Interview were the sources of primary data.

Thus, the primary data was gathered through the use of the following several methods.

- A. Survey method: the survey was covered three Tabias and six villages that consist an estimated 2015 household heads. Two villages were selected randomly using lottery method from each Tabia and each village represented equal proportion of farm household respondents. The farm household respondents were undertaken by simple random sampling method and their list was drawn from the list of tabia residents. Generally, 180 questionnaires were distributed for the household heads. Thus, the samples of the study are 180 households. The structured questionnaire was employed to collect quantitative data

from the household heads. The sample size of the study is determined based on Kothari's formula as follow:

$$n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2(N - 1) + z^2 \cdot p \cdot q} \dots \dots \dots 1$$

Where: N = size of population, p = sample proportion of successes, n = size of sample, $q = 1 - p$, z = the value of the standard variant at a given confidence, e = acceptable error (the precision). Thus, $N = 2015$, $p = 0.02$, $z = 2.005$, $e = 0.02$

Therefore, $n = \frac{(2.005)^2 (0.02) (1 - 0.02) (2015)}{(0.02)^2 (2015 - 1) + (2.005)^2 (0.02) (1 - 0.02)}$
 $n = 180$

- B. Focus group discussion: Three focus group discussions were organized in the three villages and the fourth focus group was with the relevant government organizations. The number of participants in each focus group was range from 8 to 10 persons. The participants of the village focus group discussions were four disputed household heads, elders and church representatives. The fourth focus group was a composition of representatives from the relevant government offices like woreda desk land administration office, rural agricultural office, woreda court, police station, three Tabia leaders, and justice office.
- C. Interview: The interview was conducted with selected individuals like local social courts, local land conflict mediators, elders, development agents, local land use and administration, rural land tribunals and legal counselors. Totally, 10 individuals were interviewed.

Furthermore, there was detail review of the woreda court files related to civil cases with special emphasis on land-related cases. Moreover, documents and reports available in the woreda desk land administration office and justice office were reviewed in order to recognize the number of farm land conflicts reached there and identify the main causes. To articulate the problems as well as building logical frame works, journals-articles and related researches with the study are again analyzed. Furthermore, action plans and programs of the woreda administration were assessed if it includes mechanisms of conflict resolution and way of handling farm land conflict.

Research strategy and design

Woreda Tahtay Qoraro consists of 14 Tabias with its total population of 68,549. Based on the document analysis of the woreda court and woreda desk, there are three Tabias which have been seen intense farm land conflict in the woreda. These are Tabia Lemlem, Tabia Beles and Tabia Maay Liham with 1868, 1520 and 1515 household heads respectively. The researchers believe that taking these Tabias purposefully will support to carry out the objectives of the study. Totally there are 4903 household heads in all the three Tabias. The study employed both quantitative and qualitative method. In the data collection the survey used household unit. The cross-sectional study is found to be more appropriate for this study since it involves sampling various sections of a population at a point in time.

Data collection

Information regarding all aspects of mutual perceptions, socio-economic consequences of farm land conflict, agricultural productivity and the current and historical situation of relations of farmers was mainly gathered from the focus group discussions, the sample survey and interviews with different subjects. Background information for discussions on conceptual issues, conditions of farm land conflict and its socio-economic consequences was gathered from secondary sources in order to consolidate the first hand information. Reports on causes of farm land conflict in the area by a woreda desk and court document analysis was also utilized basically to supplement information gathered from primary sources.

To collect data through questionnaire, the researchers hired six experienced enumerators/data collectors who were supervised by the researchers. Data was collected on the month of March in the three purposefully selected tabias of the study area. The researchers had arranged time schedule for focus group discussion and conducted it while the enumerators collect data from farm households. Furthermore, interview was conducted side by side with the survey but after the focus group discussion conducted.

Data processing and analysis

The information collected from data sources was organized and statistical computations were made to explore the inherent relationships among the different variables. The qualitative data obtained through interview and

focus group discussions is described qualitatively in sentence form. Responses from the household survey are fed into a computer and analyzed using SPSS version 16.0 software. Simple quantitative analysis techniques such as percentage and frequency distributions are employed. Finally, the results are summarized into tables so that the analysis and meaningful interpretation of results are made to draw conclusions and implications.

3. Result and discussion

Farm land conflict

Table 3.1: The size of respondent's farm land in hectares and its mean

Variable	Cases	Fr.	Percent	
Size of farm land in hectares	< 1 hectare	58	34.2	
	1 hectare	74	43.5	
	1.25-1.5 hectares	31	18.2	
	> 1.75 hectares	7	4.1	
Total		170	100	
Mean = 0.91		Maximum= 3	Minimum=0.25	Sum= 165 Hectares

According to the woreda document analysis the average size of land holding is 1.06 but based on the household survey the average land holding per household is 0.91. Table 3.1 presents majority of the respondents own one hectare (43.5 percent) and less than one hectare (34.2 percent). Overall, sample households own or cultivate 399 plots with a total size of 165 hectares and an average size of 0.91 hectares. Among the respondents the maximum land holders possess 1.5 hectares with the sum of their children whereas the minimum land holders possess 0.25 hectare.

According to the focus group discussants the maximum size of land holding permitted for one farm household in the area is 1.5 hectare considering their family size. Farm households which have large family size get this maximum farm land. Therefore, the maximum three hectares in the table indicates that there are few farm household respondents who plough three hectares using their own land and rental land. Moreover, the farm household respondents who possess more than 1.75 hectares in the above table are also indicating as they are holding own and rental farm lands.

Table 3.2. Causes of farm land conflicts

Causes	Total score	Mean score	Remark
Land grabbing	637	3.64	Major cause
Scarce farm land	710	4.06	Major cause
High demand for land	696	3.98	Major cause
Increasing population growth	742	4.24	Major cause
Divorce	387	2.21	Minor cause
Building extension on the private land	814	4.65	Major cause
Rental land	311	1.78	Minor cause
Drainage	730	4.17	Major cause
Inheritance problem	693	3.96	Major cause
Overlapping ownership	386	2.21	Minor cause
Fragmented land	737	4.21	Major cause
Fertile land	343	1.96	Minor cause

Ofuoku and Isife (2009) used 5-point Likert-type scale to identify the main causes of conflict. Accordingly they measure the causes by calculating the mean of each variable and they identified a variable as a major cause if its cut off score is ≥ 2.50 and minor cause or not if its mean is < 2.5 . As a result, this study employs the same calculation to identify the major causes of farm land conflict.

Table 3.2 show that the major cause of farm land conflicts in the study area as indicated by the farm household respondents is building extension on private land (mean = 4.65). Deininger and Castagnini (2004) in Uganda and Yamano and Deininger (2005) in Kenya came across with the same finding. Large numbers of farm land disputes reach to the local land administration are caused by exceeding boundary. Another causes of farm land conflict as opined by the farm household respondents are increasing population growth and fragmented land (mean = 4.24 and 4.21 respectively). Farm household respondents (mean = 4.17) regarded drainage as another cause of farm land conflict, especially in the summer season. Another major cause as rated by farm household respondents is the scarce farm land (mean = 4.06). Increased scarcity of cultivated land, which can support a family of rural households provokes for action by households towards protecting their interest (Bogale et.al, 2008). Moreover, high demand for land, inheritance problem and land grabbing are other causes of farm land conflict which the farm household respondents regarded on it.

Farm household respondents did not see rental land, fertile land, overlapping ownership and divorce as a main source of farm land conflict. The community is not easily tempered and come across to farm land conflict because of these causes. Thus, these are the minor causes of farm land conflicts in the study area.

Furthermore, all the focus group discussions agreed and listed all the causes find by the survey. Exceeding boundary is the most common cause of farm land conflicts for the focus group discussants. Drainage is seasonal cause of farm land conflict because in the summer season large number of farmers engaged to farm land conflict because of drainage. In summer season, farm land conflicts caused by drainage are greater than conflicts caused by exceeding boundary. Farmers divert the direction of the drainage which comes to their plot in order to protect from erosion. Since the plots are compounded by many other plots, the drainage overflow to the neighbor plots and conflict occur between/ among farmers.

In addition to the causes they said that land administration problems have a great role to worsen farm land conflicts. There are two offices which see land cases in the Tabia level. The first is local land use administration responsible to distribute land of deceased individuals to landless and other land administrations. The second is rural land tribunals responsible to solve farm land conflicts. These local offices working days are two days per week and they provide service without salary. Because of that they are not committed and not work effectively in the given two days. Therefore, the local community is suffering from sufficient service of land administration. In addition to that the two local responsible offices have knowledge gap to administer and solve conflicts based on the rules and policies because they are not professionals and well educated. Furthermore, the community has no knowledge on the national and regional rural land proclamations. The data gained from the interview also supports this idea. The interviewee from the local land use administration and rural land tribunal said that they do not have salary and they are wasting their time without any payment. Therefore, they are coming to office after they finish their home activities. Thus, the land issues of individual farmers which come to the local land administration and rural land tribunals delay to get decision.

Economic costs of farm land conflict

Conflict over farm land has a lot of economic crisis like money and time wastage on the farmers. Table 3.3 shows all the economic costs of farm land conflict and how it affects the personal income of individuals.

Table 3.3: Overview of all conflicts and farm land conflicts reached to the woreda court since 2008

Types of conflicts	2008	2009	2010	2011	2012	
Total						
All conflicts	414	521	610	402	212	
2159						
Farm land related disputes	169	287	336	247	134	
1173						
Border conflict	101	150	150	159	76	636
Inheritance	56	112	162	65	47	442
Land grabbing	11	25	22	8	6	72
Drainage	-	-	1	3	-	4
Ownership	1	-	1	12	5	19

Table 3.3 shows that more than half of the cases reached and recorded in the woreda court are farm land issues. Thus, the farm land related conflicts reached to different offices are high. Overall farm land related conflicts reached to the woreda court in the last five years are 1173 disputes. Among these disputes more than half (54.2 percent) reached to the woreda court are border disputes followed by inheritance disputes 37.7 percent. This indicates that majority of the plots are not clearly demarcated in the study area.

Table 3.4: Descriptive Statistics of cases delay and costs of conflict in the court

Variables	N	Min.	Max.	Range	Mean	Sum
Days taken in case 1	67	4	1825	1821	122.12	8182
Days taken in case 2	31	5	700	695	128.06	3970
Days taken in case 3	18	15	1050	1035	196.94	3545
Days taken in case 4	7	60	365	305	139.29	975
Costs for legal counselor	3	500	1000	500	733.33	2200
Living cost	67	60	2350	2290	588.35	39420
Material cost	67	60	1500	1440	334.02	22380
Transport cost	67	5	1300	1295	217.01	14540
Time wastage in days	67	3	120	117	14.23	954

N= Number Min=Minimum Max=Maximum

According to Table 3.4, overall farm household respondent whose farm land dispute went to court needs 16,672 days to get decision for all their cases and the average is 586.41 or one year and eight months for all cases but the average time taken to get decision for one case is 146.6 days or around five months. That means one farm household respondent stay one year and eight months to be executed all his/ her land cases. This finding is similar with what Crook (2004) finds in Ghana that land cases are experiencing severe delays in the court because the case filed around two years in the court. This indicates that land dispute cases stay in process long time in the court to get decision. Therefore, the plot stay without plough and the labor of disputants become idle.

Furthermore, the overall money expenditure of farm household respondents whose farm land dispute reach to the court is 78,540 Birr. With the exception of three farm household respondents the average money which one farm household respondent expend for one case is birr 1153.64. As stated in table 5.10 in average one farm household respondent's farm land conflict case reached to the court 2.12 times per a year. Thus, in average one farm household respondent expends 2445.72 birr. The average expense of the exceptional three farm household respondents for one case is birr 1872.71 because they paid money for legal counselor. All but three of the farm household respondents did not pay for legal counselors. This indicates that almost all farm household respondents follow and defend their case themselves without appointing the legal counselor. Moreover, the average of time that farm household respondents waste in one case is around two weeks. Therefore, one farm household respondent waste more than one month when the farm land conflict went to the court. As a result, farm household respondents waste their time in unproductive activities which can produce a lot of productive activity if used the time effectively. Based on the research conducted in Cambodia the community estimates that more than US\$2,000 was spent during the conflict to cover transportation and accommodation other expenditures (Yasmi et al., 2010).

Social costs of farm land conflict

Conflict on farm land is not only affecting the economic cost of the community but also it affects the social costs of the community. Data gain from all the methods point out that there are a lot of formal and informal social organizations and associations. Among them the social associations like Idir and cooperative union, labor organizations like Lifinti, saving organizations like Iqub, religious association like Mahber, Zikir, Senbete etc and administrative association have been mentioned. There are also other social relations with in the community like intermarriage and supporting individuals in time of trouble. Furthermore, the villages focus group discussion and the interview indicates that there is good social interaction in the villages. There is good interaction among individuals who have not any farm land conflicts. However, the social interaction and support among disputant farmers is unthinkable. The dispute may be easy or latent but if it is land related issue the social interaction of the disputants deteriorate from time to time and the incidence of their dispute stay for long period of time.

Generally, social interaction among the community in the study area in the absence of farm land conflict is strong. However, the social interaction and social organization of the community gets worse in the existence of farm land conflict between/ among farmers. This indicates that farm land conflicts obstruct the social interactions of the community.

Consequences of farm land conflict on agricultural productivity

Farm land conflict declines agricultural productivity in different ways. First, the plots remain out of plough until it gets decision. Moreover, to decide on one case it takes a lot of time as demonstrated earlier. As a result, the plots stay without use or supply agricultural yield for long time. Second, farmers are not interested to use fertilizer for the plot in conflict because farmers have a threat that tomorrow this land may be given to the antagonist. Third, farmers do not conserve the land in conflict unlike other plots because they do not want to waste time and effort on the land which they are not sure to have ownership on it. Lastly, the plot is not sown, weeded and harvested on time because farmers waste their time in the woreda court and local land administration. Overall, the farm household respondents harvest 1206.5 quintals annually from the total 165 hectares. In average one farm household respondent harvests 6.9 quintals annually. When there is farm land conflict in average one farm household respondent loses 1.6 quintals annually. Overall farm household respondents' deficit is 227.75 quintals per annum. This indicates that 18.8 percent to 23.2 percent agricultural productivity loss because of farm land conflict 12 percent higher than a recent study by Deininger and Castagnini (2004) in Uganda that suggests a 5 to 11 percent productivity loss due to land conflicts.

4. Conclusion and Recommendation

Conclusion

The economy of the study area is basically agrarian with majority of its population living in rural areas and it is subsistent agriculture which depends on rain fed water and oxen plough activity. Thus, access to land is important for every household. Nevertheless, the available land holding in the study area is scarce. Building extension on private land because of poor border demarcation, population growth, fragmented land and drainage are the main cause of farm land conflict which many of the farm household respondents regarded on it but these are not the only causes of farm land conflict. Furthermore, scarce farm land, high demand for land, inheritance problem and land grabbing are other causes of farm land conflicts. Moreover, the land administration problem in the local area and lack of awareness worsens the farm land conflict. Still there is a problem in relation to the available certificate. There are many farmers now without certificate that can expose them to land conflicts because the given certificate was white paper which can be easily torn.

Large number of disputes reached to the woreda court. This exposes disputants to different economic costs and time wastage. Farmers expected to pay a lot of money for all the necessary things in time of accusation when their cases reach to the woreda court. As a result, farm land conflicts affect negatively the economy of farmers through wasting their time and money.

When farm land conflicts increase, the overall social interactions of the community comes to an end. In the absence of farm land conflict there is good social interaction among the community. However, the social interaction of the community is dreadful if there is farm land conflicts among the community. Thus, farm land conflict hampers the overall social interaction of the community.

Recommendation

Based on the results of this study, the following recommendations are made:

- The result indicates that building extension on private land is source of conflict because of poor borders demarcation and there are many farmers without certificate because the certificate tears apart easily. Moreover, the land of farmers was not measure practically in ground in 1991 land reform. To avoid these problems the desk of the woreda should immediately enter in to new demarcation process. It shall use the modern and scientific international land cadaster system by using GPS/ satellite navigation system in order to demarcate appropriately and reduce the complains. Then after, the torn out white paper certificate that has been issued shall be replaced by new indissoluble and well-designed certificate in that way. Pilots with cadastral mapping have been undertaken successfully mainly in Amhara, with use of advanced GPS-equipment and GIS-supported mapping functionalities (Deininger et.al, 2006).

- The woreda desk should create conducive environment for farmers to exchange their land on interest based especially neighbors in order to hold one organized land. The farmers who have exchange their farm land each other should be encouraged and the concerned body should execute the contract agreement quickly. This can reduce the farm land conflicts occurred because of fragmented land. The woreda desk should also distribute the land proclamations legislated every time through the local land administration to the woreda farmers in order to increase the awareness of the community on the land proclamations. Moreover, the woreda desk shall protect the farm lands which are grabbed by the farmers illegally.
- There should be large number of organized and strong local conflict mediators. Of course, there are good beginnings in the village but it needs to consolidate beyond this. Moreover, the woreda should provide fertilizer and wheat as incentives to the local conflict mediators in order to work effectively. In addition to that the community should support the local conflict mediators through providing oxen in time of plough and supporting in time of sowing, weeding and harvesting their farm land.
- The woreda court should enhance its labor forces and capacity to execute cases with in short time. Moreover, workers obliged to appoint the farmers for another day because they need long time to search files. To improve the decision process the woreda court should introduce new technology system like networking and data base.

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Glossary

Idir is a communal self-help organization especially at the time of emergency.

Iquib is a traditional saving system through rotation to take once own sum of money

Kushet is the lowest administrative unit in the village below tabia

Lfnti is an informal institution that regulates oxen and labor pooling among two households or traditional labour exchange method

Mahber is a kind of association which has religious ground; St. Michael and St. Marry for men and women are common in the study area

Rist/i is privately held land or land use right passed by inheritance

Senbete is religious association which holds every two weeks in rotation

Tabia is the lowest unit in the administrative hierarchy also referred to as a community or a peasant association

Woreda is an administrative division of Ethiopia (managed by a local government), equivalent to a district.

Zikir this is a kind of association which has religious ground to remember special occasion especially holy days

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